



UNITED STATES PATENT AND TRADEMARK OFFICE

Deb

UNITED STATES DEPARTMENT OF COMMERCE
United States Patent and Trademark Office
Address: COMMISSIONER FOR PATENTS
P.O. Box 1450
Alexandria, Virginia 22313-1450
www.uspto.gov

APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
10/528,653	03/22/2005	Masaaki Harasawa	050176	7022
23850	7590	12/15/2005	EXAMINER	
ARMSTRONG, KRATZ, QUINTOS, HANSON & BROOKS, LLP 1725 K STREET, NW SUITE 1000 WASHINGTON, DC 20006				LEON, EDWIN A
ART UNIT		PAPER NUMBER		
		2833		

DATE MAILED: 12/15/2005

Please find below and/or attached an Office communication concerning this application or proceeding.

Office Action Summary	Application No.	Applicant(s)	
	10/528,653	HARASAWA, MASAAKI	
	Examiner	Art Unit	
	Edwin A. León	2833	

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
 - If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
 - Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133).
- Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) Responsive to communication(s) filed on 22 March 2005.
- 2a) This action is FINAL. 2b) This action is non-final.
- 3) Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) Claim(s) 1-10 is/are pending in the application.
- 4a) Of the above claim(s) _____ is/are withdrawn from consideration.
- 5) Claim(s) _____ is/are allowed.
- 6) Claim(s) 10 is/are rejected.
- 7) Claim(s) _____ is/are objected to.
- 8) Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

- 9) The specification is objected to by the Examiner.
- 10) The drawing(s) filed on 22 March 2005 is/are: a) accepted or b) objected to by the Examiner.
- Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
- Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

- 12) Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) All b) Some * c) None of:
1. Certified copies of the priority documents have been received.
 2. Certified copies of the priority documents have been received in Application No. _____.
 3. Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

* See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

- | | |
|---|---|
| 1) <input checked="" type="checkbox"/> Notice of References Cited (PTO-892) | 4) <input type="checkbox"/> Interview Summary (PTO-413) |
| 2) <input type="checkbox"/> Notice of Draftsperson's Patent Drawing Review (PTO-948) | Paper No(s)/Mail Date. _____ . |
| 3) <input checked="" type="checkbox"/> Information Disclosure Statement(s) (PTO-1449 or PTO/SB/08)
Paper No(s)/Mail Date <u>5/05; 3/05</u> . | 5) <input type="checkbox"/> Notice of Informal Patent Application (PTO-152) |
| | 6) <input type="checkbox"/> Other: _____ |

DETAILED ACTION

Claim Rejections - 35 USC § 103

1. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

2. Claims 1-10 are rejected under 35 U.S.C. 103(a) as being unpatentable over Molex Inc. (Japanese Patent No. 6-44063) in view of Chen et al. (U.S. Patent No. 6,592,268). With regard to Claims 1-2, 6 and 9-10, Molex Inc. (Fig. 6) discloses a connector comprising a contact terminal (10) wherein contact portions (11) and board connection terminals (12) are connected by spring bodies (13); a movable housing (2) for receiving the contact portions of the contact terminal, a fixing housing (3) to which the board connection terminals of the contact terminal are fixed; the contact terminals are installed in the movable and fixing housings, and both housing are connected by the spring bodies with a predetermined spacing.

However, Molex Inc. doesn't show through-holes penetrating through both the movable housing and the fixing housing, reinforcing pins are inserted into the through-holes so that the movable housing can move up and down within a predetermined range against the fixing housing, the inner diameter of the through-hole is almost close to the diameter of the reinforcing pin, the length of the reinforcing pin is set so that the

pin may project over a predetermined distance from the upper and lower faces of the movable housing and the fixing housing in which the housings are separated by a predetermined spacing and stacked.

Chen et al. (Figs. 11 and 13) discloses a similar connector (28A) having through-holes (inside 70) penetrating through both the movable housing (upper 54) and the fixing housing (lower 54), reinforcing pins (72A, 74) are inserted into the through-holes so that the movable housing can move up and down within a predetermined range against the fixing housing, the inner diameter of the through-hole is almost close to the diameter of the reinforcing pin, the length of the reinforcing pin is set so that the pin may project over a predetermined distance (Fig. 9) from the upper and lower faces of the movable housing and the fixing housing in which the housings are separated by a predetermined spacing and stacked (Fig. 9).

Therefore, it would have been obvious to one with ordinary skill in the art at the time the invention was made to modify the connector of Molex Inc. by including through-holes penetrating through both the movable housing and the fixing housing, reinforcing pins are inserted into the through-holes so that the movable housing can move up and down within a predetermined range against the fixing housing, the inner diameter of the through-hole is almost close to the diameter of the reinforcing pin, the length of the reinforcing pin is set so that the pin may project over a predetermined distance from the upper and lower faces of the movable housing and the fixing housing in which the housings are separated by a predetermined spacing and stacked as taught in Chen et

Art Unit: 2833

al. in order to provide a system for mounting the connector to a substrate with relative floating movement between the parts. (Chen et al., Column 1, Lines 59-62).

The limitation "for connecting printed boards" has been given little patentable weight since it has been held that a recitation with respect to the manner in which a claimed apparatus is intended to be employed does not differentiate the claimed apparatus from a prior art apparatus satisfying the claimed structural limitations. *Ex. parte Masham*, 2 USPQ2d 1647 (1987).

With regard to Claim 3, Molex Inc. (Fig. 6) discloses the spring bodies being formed by flexible plates (Fig. 9) that can absorb an impact force.

With regard to Claim 4, Molex Inc. (Fig. 6) discloses the spring bodies being of approximately lateral formed by one or a plurality U-shaped spring bodies (Fig. 9) or leaf spring bodies (Fig. 9) connected in series.

With regard to Claim 5, Molex Inc. (Fig. 6) discloses the spacing between the movable housing and the fixing housing being set so that the spring bodies are not deformed permanently when they are bent.

With regard to Claim 7, Molex Inc. (Fig. 6) discloses the movable housing comprising contact container portions (Fig. 2) formed of a plurality of shelves (Fig. 2), the plurality of the contact portions are arranged separately in each shelves, and wherein board connection terminals are fixed in the fixing housing.

With regard to Claim 8, Molex Inc. (Fig. 6) discloses the contact portions are formed by thin plates (Fig. 9) and the lateral widths of the spring bodies and board connection terminals are narrower (Fig. 9) than those of the contact portions.

Conclusion

3. The prior art made of record and not relied upon is considered pertinent to applicant's disclosure. Chishima et al. (U.S. Patent No. 5,474,468), Kunishi (U.S. Patent No. 6,039,590), Kaneko (U.S. Patent No. 4,810,215) and Narozny (U.S. Patent No. 4,270,826) disclose connectors similar to Applicant's claimed invention.
4. Any inquiry concerning this communication or earlier communications from the examiner should be directed to Edwin A. León whose telephone number is (571) 272-2008. The examiner can normally be reached on Monday - Friday 10:00-6:30.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Paula A. Bradley can be reached on 571-272-2800, extension 33. The fax phone number for the organization where this application or proceeding is assigned is 703-872-9306.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free).

Edwin A. Leon
Edwin A. Leon
AU 2833
EAL
December 8, 2005

T. Nguyen
TRUCT. NGUYEN
PRIMARY EXAMINER